

W6IFE San Bernardino Microwave Society Newsletter

President Chip Angle N6CA 25309 Andreo Lomita, CA 90717 310-539-5395 chip@anglelinear.com

VP Joe Saddler WA6PAZ 13909 Fidler Bellflower, CA 90706 310-867-3294

Recording Sec Eric Fort KD6GLP PO Box 42 Etiwanda, CA 91739 909-899-3092

**Corresponding Sec Phil Biles K6COY 446 Colorado St. Anaheim, CA 92801 714-527-3632
philbiles@worldnet.net**

**Treasurer Dick Kolbly K6HIJ 26335 Community Barstow, CA 92311 760-253-2477
70541.2312@compuserve.com**

Editor Bill Burns WA6QYR 247 Rebel Rd Ridgecrest, CA 93555 760-375-8566 bburns@ridgecrest.ca.us

ARRL interface Frank Kelly WB6CWN 1111 Rancho Conejo Blvd. #501 Newbury Park, CA 91320 805-499-8047 fk@event1.com

FCC interface Dave Laag K6OW 11614 Indian St. Moreno Valley, CA 92557 909-924-1517

**W6IFE license trustee Ed Munn W6OYJ 6255 Radcliffe Dr. San Diego, CA 92122 619-453-4563
75353.1255@compuserve.com**

The 7 **August 1997** meeting will have Frank, WB6CWN as the speaker and his topic will be internet microwave resources. SBMS meets at the American Legion Hall 1024 Main Street Corona CA at 1930 hours local time.

Last meeting had Chuck, WA6EXV going over the iris and post type waveguide filters and what you could do with one. His hand out had design examples of each type. More of Chucks filter work appears in this newsletter. thanks Chuck. The hot day and close relation to the 4th holiday only had 22 people present at the meeting. It was agreed that SBMS would look into exchanging newsletter with Eric Moutet F1GHB who is the editor of HYPER in France. Bill, WA6QYR had sent copies of Dave, K6OW's Circulator article, Frank, WB6CWN's "Maps and Stuff" piece, and Dick, K6HIJ's antenna positioning piece to SBMS member Bruce Wood, N2LIV for publication in the Eastern VHF/UHF Conference Proceedings, partly sponsored by NEWS (North East Weak Signal) Group. The conference is in August.

Steve, NJ6J reported copying the SBMS 2.3 Ghz beacon to Chuck, WA6EXV. Steve will be receiving the SBMS certificate. Chuck reported that so far no-one has successfully copied the beacon message 100% correctly. New email addresses- Derek, KN6TD, KN6TD@clubnet.net; eric, KD6GLP, efort@clubnet.net; Joe K6IBY, K6IBY@aol.com.

Scheduling

16-17 Aug. ARRL 10 Ghz & Up contest 1st half

4 Sept. tech talk Dave K6OW and Joe WA6PAZ on wide and narrow band modes of microwave

12-14 Sept. ARRL SW Div. Convention in Riverside, CA--SBMS talks and demos!!!!

13-15 Sept. ARRL Sept. VHF QSO Party

20-21 Sept. ARRL 10 Ghz & Up contest 2nd half.

2 Oct. tech talk tbd.

6 Nov. tech talk tbd.

4 Dec. tech talk tbd.--need to know what you wish to hear about, so speakers can be arranged.

1 Jan meeting---do we need to move it to 8 Jan?

Doug, K6JEY would like to team up with someone who wants to work on a team approach to 10 Ghz EME. He has most of the transmitter and receiver parts. 562-424-3737.

Congratulations to Chuck, WA6EXV & Dave K6OW on setting a new North American 24 GHz distance record. Yesterday, July 5th 1997 at 1414Z. Chuck from DM06WL, Walts Point and Dave from Heaps Peak DM14KF set a new distance record of 166.25 miles (267.5 km corrected) using 100 milliWatt gunns and 2 foot dishes, Signals were at times 20 dB out of the noise. Further distances will be forth coming we're sure. Keep up the super effort guys!

SBMS President- Chip, N6CA

SBMS member activities on 7-5-97

Chuck, WA6EXV went to Walts Point DM06wl, Bill went to Laurel Mtn DM15DL and Dave K6OW went to Heaps Pk DM14 KF. By 0730 there had been contacts between all three on 24 Ghz WBFM. The long haul was Heaps to Walts point of 165 miles. New North American record. Congratulations Chuck and Dave. Bill was about at the mid point.

Also out that day were Steve NJ6J and Bob W6SYA at Heaps Pk. Steve worked Chuck on 2304.025mhz, but had troubles with the high RF levels from transmitters on the peak. Bob worked Chuck on 10.25 Mhz WBFM. Bob is now in the big league with over 100 miles on 10 GHz.

Bob, W6SYA worked Dave, K6OW on 10 Ghz WBFM in Colton DM14ib and on 24 Ghz WBFM from Heaps Pk.

Bill had forgotten the magic coax adapter to the antenna so couldn't get on 2.3 Ghz. He went home with intent of working Chuck on 24 Ghz from DM15DP at much lower elevation, but screws had come out of the 24 Ghz head during the trip down the hill. He did work Chuck on 2.3 Ghz SSB. Bill carried his 10 Ghz WBFM gear back to Laurel PK but conditions changed and he failed to work Bob on Heaps. Bill did make contact with Steve on 2.3 Ghz SSB after Steve had taken off his preamp to cut some of the interference and listening between electronic noises on the hill.

Bill, WA6QYR runs 100 mw on 2.3 GHz with 12 dB NF (no preamp) and triband feed to a 27 inch dish. On 10 Ghz WBFM his gunnplexer rig is 6 mw, 21 inch dish and 12 dB NF. On 24 Ghz WBFM it is a 100 mw gunn into an 18 inch DSS dish with maybe 12 dB NF.

Chuck, WA6EXV had 17 mw , 2 ft dish and 2 dB NF on 2.3 Ghz; on 10 Ghz WBFM he has 15 mw, the 18 inch DSS dish and 12 dB NF; and on 24 Ghz WBFM he has 100 mw, 18 inch DSS offset feed antenna and 8 dB NF.

Steve, NJ6J has 800 mw , 24 inch wire dish and 2 dB NF preamp with Down East No-Tune rig on 2.3 GHz.

Bob, W6SYA has 60 mw gunn oscillator, 18 inch DSS off-set feed antenna, 12 dB NF on 10 Ghz WBFM On 24 GHz he has an unknown power out gunn oscillator, a 10 dB horn, and 12 dB NF.

Dave, K6OW has a 100 mw gunn, 24 inch dish and 7 dB NF on 24 Ghz WBFM.

KC6CCC ATV REPEATERS: here's all the info on both repeaters. Santiago, OUTPUT (3480 HORZ.

Subcarriers, 6.0, 6.2, 6.5-ID., & 6.8),INPUTS (10.4 GHz HORZ., 6.8audio), (2418 VERT.CONTROL LINK, 6.0 audio from KC6CCC's QTH), 2418VERT.Blueridge LINK from Running Springs, Controlled,(3380 from Heaps Pk., 6.8 audio, Controlled) & TOWERCAM, standard control on 1.2 GHz.

Heaps Pk.,(3380 HORZ. Subcarriers, 6.0, 6.2, 6.5-ID, & 6.8), INPUTS(10.4 GHZ HORZ. 6.8 audio), (2441.5 VERT., 6.0 audio), (3480 HORZ. from Santiago Pk., 6.8 audio, controlled), & TOWERCAM, standard control on 2.4 GHz. Hope this of some help Bill. 73's AL K6LJM"Brent A. Johnson" <k6ljm@local.net>

New SHF server Hello, I've just finished creating new pages dedicated to ATV and SHF. You'll find them at <http://web.aurecvideo.fr/infracom/hyperg.html>, or <http://web.aurecvideo.fr/infracom/db6nt.html>.

You're free to add these links to the ones you already have, if you think they can help your readers.

Vy 73, Eric BERTREM Email : infracom@meteor.aurecvideo.fr

Web : <http://web.aurecvideo.fr/infracom> or <http://ham.ireste.fr/f5pje>

* New address: INFRACOM Le Velasquez, 69 boulevard Albert 1er

* 44600 Saint Nazaire Tel / Phone : 02 40 70 97 68 *

From: "Robert E. Munn" <edmunnn@compuserve.com>

Activity reported at July meeting

Doug, K6JEY is working on 10 Ghz rig and has rubidium frequency source working; Ken, WB6DTA had 2 contacts on 1.2 Ghz from DM22 during the contest; Ed, KE6BAA bought some solfan gunn oscillators; Gary, W6KVC built a 10 Ghz rig; Dick WB6DNX is redoing his shop; Ed, K6ODV had one 1.2 Ghz contact during the contest; Jim, K6ML is working on a 10 Ghz rig; Eric, KD6GLP worked on some wireless video for fieldday; Dick, K6HIJ has a mount design for a 10 ft TVRO dish; Chip, N6CA has a 52 Ghz radio he plans to modify to 47 Ghz; Dave, K6OW now has a 26 Ghz counter and a 2 Ghz LO; Chuck, WA6EXV modified one of the 2ghz amplifiers to produce 7 w after rebuilding the pwbs.

Eric, KD6GLP reports that <http://tiger.census.gov> provides a data base that if you provide a lat/long, it sends you a map centered on those locations.

World Above 1000MHz....I have just updated my webpages with the first of several microwave software applications, the Microwave Bibliography by G0CZD. This is a very useful database of references to technical articles published in the RSGB Microwave Newsletter, Dubus, VHF Communications, etc, over the past decade or so and accurate to early June 1997. The software is available for download now.... Other software items will be provided over the coming months, webspace permitting! Other updated items are: #email addresses for microwavers , #contest adjudicator address change for RSGB Microwave contests, #G3APY and early 10GHz experiments. Please look at the sites shown in the signature to this posting.73 from Peter, G3PHO Editor: RSGB Microwave Newsletter Microwave Homepage (The World above 1000MHz): <http://freespace.virgin.net/p.day/ghz.htm>

(mirror site at: <http://www.geocities.com/SiliconValley/Vista/7012> and at <http://www.qsl.net/g3pho>

June contest- On Saturday I went to Soledad about 1100-1330. Worked N6IZW at his home

QTH on 10 GHz. Attempted to work AB6SM in La Habra Heights but no sigs heard either direction. No other stations were heard on 10 GHz. Beacons from PV and FZR were in but weak on Soledad. John WB6BKR arrived as I left to go home. At home I set up my 0.3 watt rig inside the house looking out

a window at Soledad, 2 miles away. The antenna was a 12 dB horn ala Solfan. I worked WB6BKR with strong sigs and was surprised to be called by and worked Art KC6UQH on his hilltop location in Escondido, by bounce off Soledad. On Sunday Kerry N6IZW and I went to Mt. Laguna and did make contact on 144 SSB with WB7VVD on Mt. Harquahala DM33HT in Arizona. We made two long attempts to QSO on 10 GHz but no trace of sigs heard in either direction. We did work Chuck WB6IGP back in San Diego (not via repeater). Later in the session the PV Beacon was heard very faintly via the Miguel repeater but not via direct path. Also made a 10 GHz WBFM attempt with KE6ALM/MM south of San Clemente Island (165 miles) but with low gain antennas on both ends and poor propagation we did not succeed. On 2 mtrs we worked several stations in DM43 Arizona as well as DM33. Ken WB6DTA in DM22 helped us to make liaison contact with the WB7VVD group. Prior to the contest day I attempted a 24 GHz WBFM QSO with Frank, AE6L on Point Loma from a site about 8 miles north. I heard his stn very well but his rcvr did not work. Bert, K6BTO also has a 24 GHz rig and we expect all will be working in a week or so. 73s from Ed, W6OYJ

More June Contest-Yes, conditions were lousy. I check the FM broadcast band for signals from Santa Barbara on the way down. They were way down or nonexistent, so I knew it was going to be bad. We decided to stop in DM 10 first because of this. It took us almost an hour to make a contact on any band. I have only seen conditions this bad on one other occasion. Best DX here was WB7VVD in DM33, who we worked on 6, 2, and 220. Didn't make it on 432. Inland propagation was not that bad, it was the coastal ducting that was attenuating instead of enhancing. Pepe was operating 6 meters most of the time and I kept telling him to be patient, that the band was on the verge of opening and that signals from W5,7, and 0 would soon be pegging the S meter. He soon realized that getting some Z's was more exciting than operating 6 meters.

Because of conditions and Pepe anxious to get back to the family for fathers day, we packed up Sunday morning and dropped Pepe off in Ensenada. I then arrived at Punta Banda DM11 around noon and set up. Conditions were getting better plus I was only 75 miles from the border. Toward the end of

the contest conditions returned to near normal.

I was thinking while on the trip, that it wasn't so bad that so many that had planned to accompany me bailed out. It would have been embarrassing for me to tell everyone how great it was and then have it flop.

I did work DM05 near Tehachapi on 1296. Also near the end, I worked a couple in the bay area on 2 as well as K7XC mobile in DM06 with his Omni antennas. I haven't counted grids yet, but it looks like 61 Q's from DM10, and 87 from DM11. I stopped in Puerto Nuevo for a lobster dinner on the way home and as a result I arrived at the border around 11 pm. Another first, I pulled right up to the customs inspector with no cars in front of me. Incredible.

I received word from XE2HWH that he and XE2HWB went out portable near La Paz only to have equipment failure an hour into the contest. Bernardo did have at least one QSO from his home QTH later on, but no specifics yet. 73 Jack n6xq@ham-radio.com (Jack Henry)

K6STI's new DSP blaster 2.0 Hello Microwavers, I know there is interest in the SBMS in signal processing of weak signals. I just received some information from Brian, K6STI, on the latest version of his DSP blaster which uses the sound card in a computer to do the processing. His message was rather lengthy, so I will summarize and if you are interested, I can forward the entire message, or you can send e-mail to Brian directly, k6sti@n2.net. He can also attach a demo version which will last for a limited time. Basically he now processes phase data (I & Q channels) as well as frequency and amplitude. He claims the new processing yields an easy 3 dB increase in S/N. The program utilizes the data in some unique ways to assist the operator in listening to the signals, such as stereo output of the different channels. I have not used the program yet, but was impressed by the description of the performance and features. I have no commercial interest in the product, but am just disseminating the

information because I know there is interest in the group. Adios Jack N6XQ n6xq@ham-radio.com 92 countries on 50 Mhz To see me and others of the San Bernardino Microwave Society (SBMS),

Check out <http://www1.ham-radio.com/sbms/sbms.html>

ARRL PACIFIC DIVISION UPDATE JULY, 1997 by Brad Wyatt, K6WR, Director, Pacific Division,
ARRLPacific Division Home Page -- <http://www.pdarrrl.org/>

Latest Band Threat News:-After another round of meetings in Geneva, concluded in mid June, it appears that the Little LEO companies have not been able to advance their proposal for the "broad allocation" scheme they submitted to the U. S. delegation to WRC 97. The FCC/NTIA apparently have not been able to develop a position on this whole matter as yet. This situation may remain this way until WRC 97 opens in Geneva in November. However, other country's delegations may yet propose this or some other scheme as the Little LEO companies have been busy in other parts of the world trying to sell their ideas. Also, while it is possible that in WRC 97 nothing may come of this matter, the Little LEO companies are not giving up. Regardless of what happens at WRC 97, they are sure to be back for WRC 99. However, their fate may be resolved for them by the financial markets as it evaluates Little LEOs with other competitive satellite programs. See page 71, July QST for more information.

On another topic, unhappily we may be coming closer to having the wind profiler devices in the 70 cm. band. Details are very sketchy, but ARRL is trying hard to be sure that if there are any allocations they are not in certain key parts of the band. Remember that our allocation at 70 cm. is secondary not primary.

There is some interesting news on the entire Spectrum Auction process. Some in Congress are having second thoughts on several aspects of this process. See page 16, June QST and page 16, July QST.

Unfortunately, the future of all these threats is unknown. We won't be able to breathe easily about WRC-97 issues until the final gavel comes down on Nov. 21, 1997.

On Sunday July 6, Pete Bauer, W6DXJ called Ed Munn, W6OYJ from Los Angeles to say that he had set up temporarily near the Griffith Observatory and had copied the Mt. San Miguel Beacon (DM12mq, 10,368.024 MHz) with good strength. He asked Ed to get on the air and see if the Mt. Miguel all-mode

on-frequency repeater would support a QSO over that path. They agreed on a frequency (+100 KHz offset from the Beacon). The QSO was made on SSB with good signals reported at both ends. Pete runs about 1 watt to a 20 inch dish, and Ed used a modified MACOM rig with about 300 milliwatts/30 inch

dish, pointed southeast toward Mt. Miguel from his QTH in north San Diego. The bounce path distances were: Griffith Park (DM04uc to Mt. Miguel) 201km/ 125 miles and W6OYJ (DM12ju to Mt. Miguel) 30 km/ 19 miles. There is nothing magic about choosing the +100 KHz offset because the repeater has a bandwidth of several MHz and, as it is linear, supports any modulation mode. The offset was chosen because both ends could hear the Miguel beacon. Ed's station has an absolute frequency uncertainty of 10-20 KHz and at that time he could not hear either the Palos Verdes or Frazier Mt. beacons via the Miguel Repeater in order to establish his frequency with accuracy. This is the longest DX reported so far using the Mt. Miguel repeater. Ed tape recorded part of the QSO. Other X-banders outside the San Diego Area are encouraged to listen for the repeater's beacon on 10,368.024-030. If you hear it , try transmitting +100 KHz from that frequency using any mode. Locals keep a watch on this frequency, especially during the evenings and on weekends. The SD County Microwave Net, held on Monday nights except the third Monday each month is also repeated on this channel, and several local stations check into this net via X-Band. The Net may also be heard on the Palomar Amateur radio Club 2-meter frequency of 146.730 (-0.600) on those evenings. 73s from W6OYJ

73's Bill

